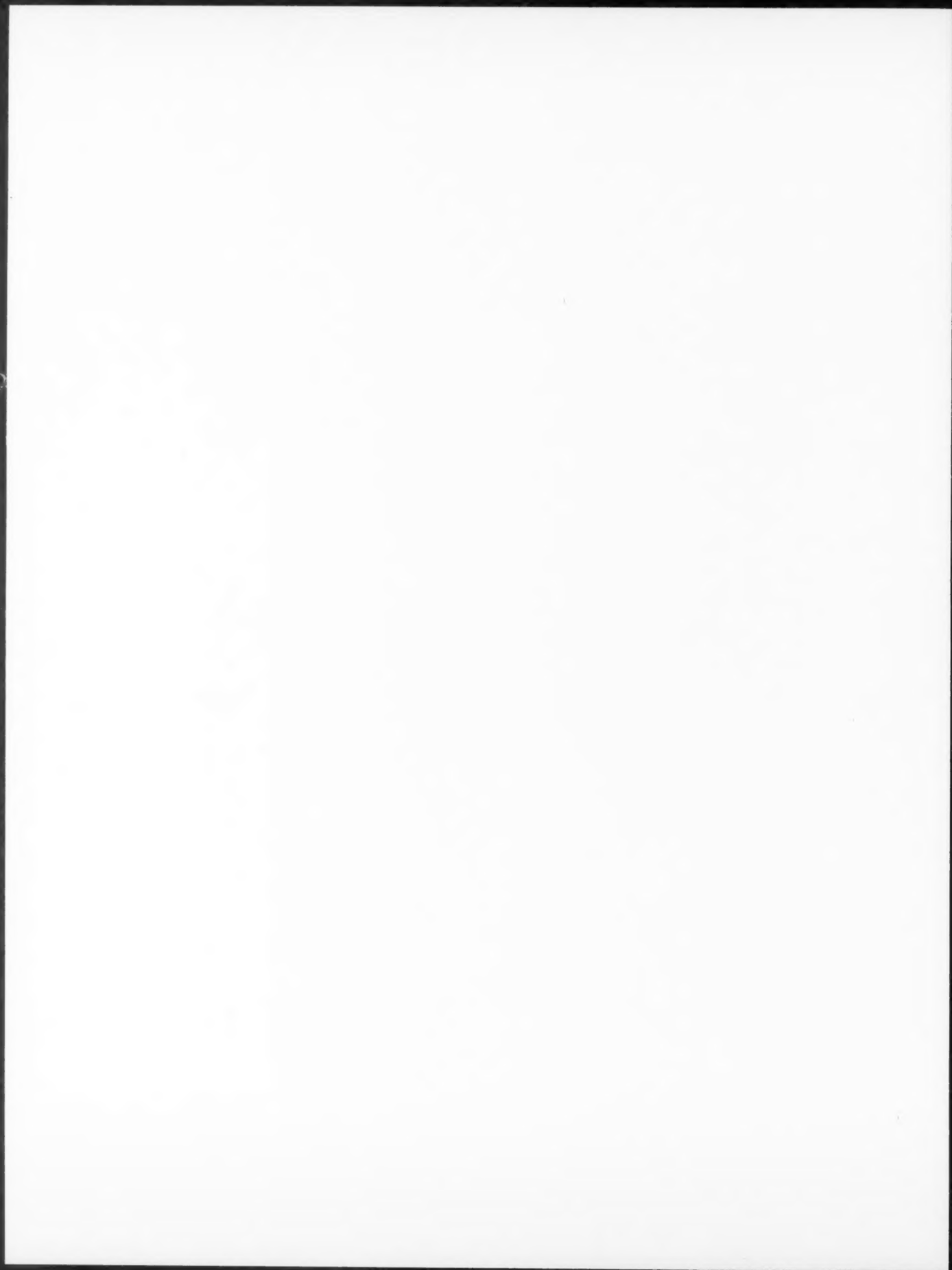

INDEX

SOIL MECHANICS AND FOUNDATION ENGINEERING

Volume 10, Numbers 1-6, 1973



SOIL MECHANICS AND FOUNDATION ENGINEERING

Volume 10, Numbers 1-6, 1973

(A translation of Osnovaniya, Fundamenty i Mekhanika Gruntov)

A

Abalev, M. Yu. - 56
Abramov, L. T. - 68
Arkhangel'skii, I. V. - 304

B

Babskii, E. G. - 14
Bakholdin, B. V. - 300
Balyura, M. V. - 71
Baranov, D. S. - 96
Baranov, N. N. - 388
Bol'shakov, N. M. - 300
Bondarenko, V. I. - 340
Bronstein, M. I. - 279
Bykov, E. N. - 360

C

Cherkasov, I. I. - 85, 252
Chernyi, G. I. - 342
Chetyrkin, N. S. - 82
Chikhachev, É. P. - 333

D

Dermelev, V. K. - 68
Didkovskii, V. M. - 25
Dolgikh, M. A. - 279
Dovnarovich, S. V. - 196
Drennova, N. N. - 390
D'yakonov, V. P. - 60, 163
Dzhurik, V. I. - 390

E

Ékman, V. E. - 176

F

Fedorov, B. S. - 143, 235, 373
Fedorov, V. I. - 394
Fedorov, V. K. - 296
Fish, A. M. - 316
Fomichev, V. B. - 211
Fraifel'd, E. B. - 140

G

Galai, B. F. - 124
Gal'perin, V. V. - 203
Ganichev, I. A. - 233
Garber, M. D. - 77
Geizen, R. E. - 100
Gendel', É. M. - 381
Gil'man, Ya. D. - 329
Ginzburg, L. Ya. - 18
Glikin, I. D. - 37
Glukhovtsev, I. N. - 68
Gol'din, É. M. - 351
Gol'dshtein, M. N. - 369
Gorbunov-Posadov, M. I. - 246
Gorodetskii, L. V. - 351
Goryainov, G. F. - 311
Goryunov, B. F. - 10
Gritsyuk, L. V. - 325
Gubkin, V. A. - 333
Gundarev, K. A. - 342
Gvozdev, A. A. - 211

I

Ignatov, V. I. - 360
Isaev, B. N. - 170
Ivanov, D. G. - 116
Ivanov, Yu. K. - 122

K

Kaganovskaya, S. E. - 192
Kananyan, A. S. - 371
Karandaev, G. Z. - 208
Karpushina, Z. S. - 42
Khanin, R. E. - 267
Khorol'skaya, G. P. - 218
Klemyatsionok, P. L. - 46
Kononov, A. A. - 179
Kononov, P. A. - 122
Kopeiko, V. Ya. - 146
Kovalenko, N. P. - 307
Kozachevskii, A. I. - 37
Kozlovskii, V. I. - 206
Krashenninnikova, G. V. - 131
Krivorotov, A. P. - 296

Krutov, V. I. - 163
Kul'chitskii, G. B. - 122

L

Lazebnik, G. E. - 116
Ledenev, V. V. - 22
Leshin, G. M. - 321
Litvinov, B. M. - 403
Litvinov, I. M. - 371
Lubenets, G. K. - 262
Lubnin, A. I. - 92
Lushnikov, V. V. - 403

M

Malikova, T. A. - 405
Malyshev, M. V. - 257
Margolin, V. M. - 60
Maslov, N. N. - 349
Medvedev, O. P. - 206
Mikhalyuk, A. V. - 342
Mikheev, V. V. - 30
Mironov, V. V. - 5
Miturskii, S. N. - 325
Mizyumskii, V. A. - 347
Musaelyan, A. A. - 138

N

Narbut, R. M. - 225
Nesmelov, N. S. - 187
Nikitin, V. M. - 187

O

Opershtein, V. L. - 216

P

Pavlenov, V. A. - 390
Pavlov, O. V. - 390
Pekarskii, A. L. - 37
Petrov, B. G. - 313
Petrukhin, V. P. - 30
Platonov, E. V. - 229

Pol'shin, D. E. - 260
Poluektov, V. E. - 106
Prokudin, I. V. - 50
Pronin, V. M. - 378

R

Reitman, G. M. - 56
Rengach, V. N. - 63
Roman, L. T. - 179
Romanov, D. A. - 96
Romanov, K. D. - 96
Rozenvasser, G. R. - 182
Rudenko, N. I. - 333
Ruppeneit, K. V. - 279
Ryzhikov, I. B. - 356

S

Semenov, A. I. - 106
Senokosov, A. I. - 136
Sergeev, Z. A. - 127
Sergevnina, V. V. - 394
Shaposhnikov, M. A. - 46
Sheinin, V. I. - 284
Shelyapin, R. S. - 22, 398
Shenkman, I. S. - 413
Shulev, A. S. - 360
Shvarev, V. V. - 252

Sidorchuk, V. F. - 96
Sidorov, N. N. - 46
Sitnikov, M. A. - 110
Smirnov, A. A. - 116
Sobolevskii, Yu. A. - 388
Sokolov, V. M. - 364
Sokolovich, V. E. - 271, 333
Sosnina, L. G. - 390
Staritsyn, A. P. - 220
Stavnitser, L. R. - 42, 230
Svetinskii, E. V. - 417
Sychev, A. K. - 141

T

Ter-Martirosyan, Z. G. - 87
Timofeeva, L. M. - 100
Trofimenkov, Yu. G. - 200
Tseitlin, M. G. - 152
Tsytovich, N. A. - 82, 233, 240
Tupikov, M. V. - 417

U

Ukolov, V. N. - 157

V

Valeev, R. Kh. - 25

Vasechko, A. V. - 336
Vasil'ev, A. V. - 206
Vasil'ev, Yu. I. - 211
Vasil'eva, A. A. - 80
Veselkov, N. A. - 106
Vil'golenko, A. M. - 291
Vorob'ev, V. L. - 75
Vovk, A. A. - 342
Vtorushin, A. A. - 390
Vulis, P. D. - 403
Vyalov, S. S. - 410

Y

Yakovlev, A. V. - 229

Z

Zabolotnyi, P. P. - 173
Zaderigolova, M. M. - 113
Zaretskii, Yu. K. - 246, 274
Zarubin, N. E. - 390
Zelenskii, V. Yu. - 170
Zhdanov, A. P. - 351
Zhinkin, G. N. - 50
Zhukov, N. V. - 1
Zhukov, V. F. - 160, 222
Zotov, V. D. - 329

TABLES OF CONTENTS

SOIL MECHANICS AND FOUNDATION ENGINEERING

Volume 10, Numbers 1-6, 1973

(A translation of Osnovaniya, Fundamenty i Mekhanika Gruntov)

Volume 10, Number 1

January-February, 1973

Engl./Russ.

Technical Progress in Agricultural Applications of Foundation Engineering—N. V. Zhukov	1	1
FOUNDATION ENGINEERING		
Analysis of Piles of Finite Length Subjected to Horizontal Loads—V. V. Mironov	5	3
Analysis of Piles Subjected to the Combined Action of Vertical and Horizontal Loads (Discussion)—B. F. Goryunov	10	6
Dynamic Investigation of Framed Foundations for Turbines—E. G. Bab'skii	14	8
Investigation of the Strength of Loams by Dynamic Tests on Piles—L. Ya. Ginzburg	18	11
Approximate Determination of the Settlement of a Rigid Rectangular Deep Foundation by the Corner Point Method—V. V. Ledenev and R. S. Shelyapin	22	13
ECONOMICS OF FOUNDATION ENGINEERING		
Toward Higher Effectiveness of the Design Solutions for Foundations of Building and Structures—V. M. Didkovskii and R. Kh. Valeev	25	15
CONSTRUCTION UNDER SPECIAL SOIL CONDITIONS		
Construction Properties of Saline Soils Used as Foundation Beds in Industrial and Civil Construction—V. V. Mikheev and V. P. Petrukhin	30	17
Analysis of Structures of Underexcavated Areas, Considering the Elasto-Plastic Properties of the Soil—A. L. Pekarskii, I. D. Glikin, and A. I. Kozachevskii	37	21
CONSTRUCTION PROPERTIES OF SOILS		
Dynamic Triaxial Tests of Sandy Soils—L. R. Stavnitser and Z. S. Karpushina	42	23
Effect of Penetrometer Cone Friction upon the Strength Characteristics of Peat —M. A. Shaposhnikov, P. L. Klemyatsionok, and N. N. Sidorov	46	26
Effect of Vibrodynamic Action on Plastic Frozen Clays—I. V. Prokudin and G. N. Zhinkin	50	28
Analysis of Foundation Beds of Structures on Silts in the Sivash Sea—M. Yu. Abelev and G. M. Reitman	56	31
UNDERGROUND STRUCTURES		
Stability of Vertical Walls of Trenches under Hydrostatic Heads—V. M. Margolin and V. P. D'yakonov	60	33
SOIL MECHANICS		
The Theory of Coulomb and Its Fundamental Significance. On the 200th Anniversary of the Paper of Charles Coulomb Concerning the Theory of Limiting Equilibrium —V. N. Rengach	63	35
Distribution of Strains in Soils beneath a Test Plate—L. T. Abramov, V. K. Dermelev, and I. N. Glukhovtsev	68	37
Horizontal Displacements in Foundation Beds beneath a Rigid Test Plate—M. V. Balyura	71	39
Design of Long Beams on Elastic Foundation Beds—V. L. Vorob'ev	75	41
BRIEF COMMUNICATIONS		
Variational Method for Investigating the Stability of Slopes—M. D. Garber	77	43

INFORMATION

The New Government Standard "Soils. Method for Laboratory Determination of the Temporary Unconfined Compressive Strength"—A. A. Vasil'eva	80	44
Eighth International Conference on Soil Mechanics and Foundation Engineering —N. A. Tsytoich and N. S. Chetyrkin	82	45

BOOK REVIEWS

N. M. Doroshkevich, G. K. Klein, and P. P. Smirenkin. Foundations and Bases —Reviewed by I. I. Cherkasov	85	46
S. R. Meschyan. Laboratory Work in Soil Mechanics—Reviewed by Z. G. Ter-Martirosyan	87	46

Volume 10, Number 2 March-April, 1973

Toward a Heightened Socialist Emulation	89	2
FOUNDATION ENGINEERING		
Measures for Improving the Connections between Equipment and Foundations —A. I. Lubnin	92	3
Investigation of the Pressure Distribution in the Soil around Piles with Spherical Enlarged Bases—D. S. Baranov, D. A. Romanov, K. D. Romanov, and V. F. Sidorchuk	96	5
Analysis of Sheet-Pile Walls by Taking into Account Their Three-Dimensional Operation —R. E. Geizen and L. M. Timofeeva	100	7
FROM THE EXPERIENCE OF CONSTRUCTION ORGANIZATIONS		
Construction of Deep Pile-Columns at the Noril'sk Combine—V. E. Poluéktov, A. I. Semenov, and N. A. Veselkov	106	11
Experience with Construction and Operation of "Dinamo" Stadium on Fill Soils in Minsk —M. A. Sitnikov	110	13
Locating Underground Cavities by Means of Radio Waves—M. M. Zaderigolova	113	14
CONSTRUCTION PROPERTIES OF SOILS		
A Set of Instruments and Equipment for Measuring Soil Pressure—G. E. Lazebnik, A. A. Smirnov, and D. G. Ivanov	116	16
Standard Characteristics of Clay Soils with Admixture of Plant Remains for the Middle Ob' River Region—P. A. Konovalov, Yu. K. Ivanov, and G. B. Kul'chitskii	122	19
Statistical Comparison of Evaluations of Settlement-Prone Loessial Rocks by One- and Two-Curve Methods—B. F. Galai	124	21
SOIL MECHANICS		
Static-Equilibrium Method of Analyzing Stability of Unsupported Slopes of Homogeneous Soil—Z. A. Sergeev	127	23
Limits of Influence of an Elastic Layer upon the Results of Beam Analyses, Taking into Account the Cohesion of a Soil with an Undeformable Underlying Layer —G. V. Krashenninnikova	131	25
ADVICE TO DESIGNERS AND INVESTIGATORS		
Experience in Predicting the Rise of Water Table after Construction—V. P. Senokosov	136	28
Deformation Properties of Loesses of the Tadzhik Depression (For Discussion) —A. A. Musaelyan	138	29
BRIEF COMMUNICATIONS		
Analysis of Intercrossed Beams on Any Type of Elastic Foundation Beds—E. B. Fraifel'd	140	31
BOOK REVIEWS		
V. A. Ivakhnyuk and N. B. Solov'ev. Construction, Design, and Analysis of Drop Shafts —Reviewed by A. K. Sychev	141	31

Forum of the All-Union Socialist Competition. Scientists in Competition - B. S. Fedorov.	143	2
PROBLEMS OF TECHNICAL PROGRESS IN CONSTRUCTION		
Experience in the Construction of Underground Rooms by the Diaphragm-Wall Method - V. Ya. Kopeiko	146	3
FOUNDATION ENGINEERING		
Improvement of the Capacity of Vibrating Hammers for Driving Pipes into Soils - M. G. Tseitlin.	152	6
Design of Pile Foundations with an Intermediate Cushion - V. N. Ukolov	157	9
CONSTRUCTION UNDER SPECIAL SOIL CONDITIONS		
Mikhail Ivanovich Sumgin (On the Centennial of his Birth) - V. F. Zhukov	160	11
Calculation of Settlement of Loessial Soil from its Own Weight with Consideration of the Shape and Dimensions of the Wetted Zone - V. I. Krutov and V. P. D'yakonov	163	12
EXPERIENCE OF CONSTRUCTION ORGANIZATIONS		
Chemical Consolidation of the Heterogeneous Foundation Soils beneath the Telecenter Building at Rostov-on-Don - B. N. Isaev and V. Yu. Zelenskii	170	16
Observations of the Settlements of a Steelmaking Plant on Situ-Cast Piles - P. P. Zabolotnyi	173	18
CONSTRUCTION PROPERTIES OF SOILS		
Precision of Determining Settlement Tendency of Soils - V. E. Ékman	176	19
The Thermophysical Properties of Peat Soils - A. A. Konovalov and L. T. Roman.	179	21
UNDERGROUND STRUCTURES		
Interaction between Traffic Tunnel Constructed by the Open-Cut Method and the Soil Conditions - G. R. Rozenvasser	182	23
SOIL MECHANICS		
Experimental Investigation of the Strain State of Foundation Beds by the Moiré Method - V. M. Nikitin and N. S. Nesmelov	187	26
Investigation of the Stability of a Clayey Foundation Bed by Means of Screens - S. E. Kaganovskaya	192	29
Dependence of Settlement of Test Plates on Size of Plate - S. V. Dovnarovich.	196	31
ADVICE TO DESIGNERS AND INVESTIGATORS		
Practical Method of Determining the Angle of Internal Friction and the Cohesion of Soils from the Data from Pressure-Meter Tests - Yu. G. Trofimenkov.	200	33
Combined Allowance for Wind Load and Heave in Designing Mast Foundations in Permafrost Zones (For Discussion) - V. V. Gal'perin	203	35
Recovery of Soil Monoliths by the Vibration Method - A. V. Vasil'ev, O. P. Medvedev, and V. I. Kozlovskii	206	36
Rapid Determination of the Shear Strength of Sandy Soils by the Vibrating Probe Method - G. Z. Karandaev	208	38
DISCUSSIONS		
Deformation of Loess Soils under the Effect of Earthquakes - Yu. I. Vasil'ev, A. A. Gvozdev, and V. B. Fomichev.	211	39
Comments on B. P. Markin's Article "Change of the Deformation Characteristics of Loess Soils during Compaction by Heavy Tampers"	214	40
Reply to E. E. Mordovets's Remarks - V. L. Opershtein.	216	41
BRIEF COMMUNICATIONS		
Settlement Properties of Loessial Rocks in the Foothills of the Eastern Sayan - G. P. Khorol'skaya	218	42

INFORMATION

Changes in Chapter SNiP II-B.1-62*	219	42
Instructions for Sounding of Soils for Construction Purposes - A. P. Staritsyn	220	43
Third Republican Conference on Engineering-Geologic Investigations in Permafrost Regions - V. F. Zhukov.	222	44
The Second International Conference on Geocryology (Frozen-Soil Science)	224	44
Seminar on Modern Methods of Underground Construction and Prospects for Their Use in Leningrad - R. M. Narbut	225	45
All-Union Public Competition on Best Quality of Construction Work	227	45

BIBLIOGRAPHY AND REVIEWS

Publication of the Collection No. 62, "Soils, Foundations, and Underground Structures" of the Scientific-Research Institute for Foundations	229	25
E. D. Rozhdestvenskii and E. S. Pesikov. Engineering Soil Science - Reviewed by E. V. Platonov and A. V. Yakovlev	229	46
G. A. Geniev and M. I. Éstrin. Dynamics of Plastic and Granular Media - Reviewed by L. R. Stavnitser.	230	47

Volume 10, Number 4 July-August, 1973

EIGHTH INTERNATIONAL CONGRESS ON SOIL MECHANICS
AND FOUNDATION ENGINEERING

Welcome Members and Guests of the VIII International Congress! - I. A. Ganichev and N. A. Tsytoich	233	2
Achievements of Soviet Science in Soil Mechanics and Foundation Engineering - B. S. Fedorov	235	3
Mechanics of Soils and Rocks in Geomechanics - N. A. Tsytoich	240	5
Advances in the Theory of Foundation Design in the USSR and Abroad - M. I. Gorbunov-Posadov and Yu. K. Zaretskii	246	8
Soviet Investigations of the Mechanics of Lunar Soils - I. I. Cherkasov and V. V. Shvarev	252	12
Karl Terzaghi (1883-1963) - M. V. Malyshev	257	15
N. M. Gersevanov and the Development of Soil Mechanics - D. E. Pol'shin	260	16

FROM THE EXPERIENCE OF CONSTRUCTION ORGANIZATIONS

Construction of Underground Structures under Complex Hydraulic Engineering Conditions - G. K. Lubenets	262	17
Experience in the Design and Construction of Pile Foundations Composed of Reinforced-Concrete Hollow Circular Sectional Piles and Shell Piles - R. E. Khanin	267	20

CHEMISTRY IN FOUNDATION ENGINEERING

Acids as Chemical Stabilizers of Clay Soils - V. E. Sokolovich	271	22
--	-----	----

SOIL MECHANICS

Consolidation and Creep with Consideration of Size Distribution of Pores in Soil - Yu. K. Zaretskii	274	23
Solution of the Axisymmetric Elasticoplastic Problem for Anisotropic Soil - K. V. Ruppeneit, M. I. Bronshtein, and M. A. Dolgikh	279	26
The Stress State of Rocks at the Actual Boundary of a Mine Working - V. I. Sheinin	284	29

TRIBUNE OF ALL-UNION SOCIALIST EMULATION

- Emulation among Pile-Driving Crews at the "Ukrgidrospetsfundamentstroi" Trust
 -A. M. Vil'golenko 291 2

FOUNDATION ENGINEERING

- Contact Pressures under an Elevator Silo-A. P. Krivorotov and V. K. Fedorov 296 4
 Investigation of the State of Stress of Clays during Pile Driving-B. V. Bakholdin
 and N. M. Bol'shakov 300 7

CONSTRUCTION UNDER SPECIAL SOIL CONDITIONS

- Determination of the Density of Offshore Sands-I. V. Arkhangel'skii 304 9
 Investigation of the Consolidation of a Peat Base-N. P. Kovalenko 307 11
 Normative Depth of Freezing of Soils in the Far East-G. F. Goryainov 311 13
 Investigation of Tangential Forces of Frost Heave-B. G. Petrov 313 14
 Experimental Investigation of the Deformability of Thawed Clay Bases-A. M. Fish 316 15

FROM THE EXPERIENCE OF CONSTRUCTION ORGANIZATIONS

- Experience with Construction of Pile Foundations for a Metallurgical Complex
 -G. M. Leshin 321 18
 Use of Bored Piles in Slide-Control Structures-S. N. Miturskii and L. V. Gritsyuk 325 20
 Use of Short Situ-Cast Pile (Micropile) Foundations in Agricultural Construction
 on Loess Soils-Ya. D. Gil'man and V. D. Zotov 329 23
 Situ-Cast Slag-Soil-Cement Piles in Slump-Prone Soils-E. P. Chikhachev,
 V. E. Sokolovich, N. I. Rudenko, and V. A. Gubkin 333 25
 Deformational Damage to Buildings Constructed on Nonhomogeneous Soils
 -A. V. Vasechko 336 27
 Industrial Experiment for Reducing Compressibility of Collapsible Soils
 -V. I. Bondarenko 340 29

CONSTRUCTION PROPERTIES OF SOILS

- Strength Properties of Loams of Various Moisture Contents under Dynamic Loading
 -A. A. Vovk, G. I. Chernyi, A. V. Mikhalyuk, and K. A. Gundarev 342 30
 Coefficient of Lateral Pressure of Clays under Long-Term Loading-V. A. Miziyskii . 347 33
 Coefficient of Lateral Pressure of Soils-N. N. Maslov 349 34

SOIL MECHANICS

- Results of Experimental and Theoretical Investigations on the Behavior of Beam Slabs
 on Elastic Foundation Beds-A. P. Zhdanov, E. M. Gol'din, and L. V. Gorodetskii . 351 35
 Use of a Model of an Elastoplastic Medium for Analyzing Static Sounding
 -I. B. Ryzhikov 356 38
 Distribution of Backfill Pressure on a Retaining Wall-V. I. Ignatov, E. N. Bykov,
 A. S. Shulev 360 41

ADVICE TO DESIGNERS AND INVESTIGATORS

- Laboratory Method for Determining the Shearing Strength of Soil Frozen Together
 with Its Foundation-V. M. Sokolov 364 43

INFORMATION

- In the Government Committee for Construction of the USSR. On Changes in the Chapter
 SNiP II-B.6-66 "Bases and Foundations of Buildings and Structures on Permafrost
 Soils. Design Norms" and Introduction of the New Construction Norms SN 450-72 368 46

BOOK REVIEWS

- E. F. Vinokurov. Iterative Methods for Analysis of Bases and Foundations with the Aid
 of Electronic Computers-Reviewed by M. N. Gol'dshtein 369 46
 E. M. Bukharin, Yu. A. Gabliya, and L. E. Levin. Design of Foundations
 of Transmission Towers-Reviewed by I. M. Litvinov and A. S. Kananyan 371 47

Results of the 8th International Conference on Soil Mechanics and Foundation Engineering - B. S. Fedorov	373	2
TRIBUNE OF ALL-UNION SOCIALIST EMULATION		
Introduction of New Techniques - Pledge of Success in Socialist Emulation - V. M. Pronin	378	4
FROM THE EXPERIENCE OF CONSTRUCTION ORGANIZATIONS		
Straightening of a Minaret - É. M. Gendel'	381	5
Experience with Construction of Industrial Buildings on a Factory Dump - Yu. A. Sobolevskii and N. N. Baranov	388	9
CONSTRUCTION UNDER SPECIAL SOIL CONDITIONS		
Predicting Changes in Seismic Properties of Permafrost during Utilization of Construction Sites - A. A. Vtorushin, V. I. Dzhurik, N. N. Drennova, N. E. Zarubin, V. A. Pavlenov, O. V. Pavlov, and L. G. Sosnina	390	10
CONSTRUCTION PROPERTIES OF SOILS		
Effect of Clay Filler on the Strength Characteristics of Rubble-Clay Soils - V. I. Fedorov and V. V. Sergevnina	394	13
SOIL MECHANICS		
Effect of the Contact Tangential Component of Reactive Resistance on Stresses in a Beam Wall on a Soil Base - R. S. Shelyapin	398	15
Relationship of the Moduli of Deformation in Soil Compression and Tension - V. V. Lushnikov, P. D. Vulis, and B. M. Litvinov	403	18
ADVICE TO DESIGNERS AND INVESTIGATORS		
Effect of Rigidity of the Superstructure on the Performance of a Foundation Plate - T. A. Malikova	405	19
INFORMATION		
The Second International Conference on Permafrost (Geocryology) - S. S. Vyalov	410	22
All-Union Symposium on Construction of Pile Foundations - I. S. Shenkman	413	24
Exhibition on "Foundation Engineering in the USSR" - E. V. Svetinskii and M. V. Tupikov	417	26
INDEX		
Author Index, Volume 10, Numbers 1-6, 1973	425	
Tables of Contents, Volume 10, Numbers 1-6, 1973	427	

